

A complete overview on Modicon Quantum

The quantum CPU or [140CRA93100](#) is a module that resides on the local IO backplane. The main feature of the CPU is that it is in a digital electronic system form that uses programmable memory for internal storage of user instruction. The purpose of these instructions is to perform some specific task such as:

- Logic
- Process sequencing
- Timing
- Coupling
- Arithmetic

The Modicon Quantum CPU controls the buses of the Quantum system. There is also included a Quantum IO module converter that converts the electrical signal to a signal level and format so that the CPU can process it.

There are also comes quantum Special Purpose I/O modules that run with the least intervention from the quantum controller after downloading module programs. These are coming in many types in the market.

Quantum Remote IO head and drop modules use 908- based networking IO configuration. The procedure of communication is done through single or dual coaxial cabling up to 15,000 feet away. It serves like a controller that supports up to 31 RIO drop when required. In the configuration of RIO there is needed a coaxial cable that connects RIO drop modules with RIO head module

The purpose of the IO single channel is to drop the adapter transfers data bidirectional among the IO modules that are installed in the same remote IO backplane and the remote IO head module that is installed in the CPU backplane. There is used a coaxial cable that interconnects the remote IO module and one or more RIO drop adapter. Coaxial cable is the best cabling scheme for RIO modules because it provides long distance capability up to five km. It provides a high performance network operating at 1.544 Mbits/s for high data throughputs. The RIO cable systems consist of a linear trunk line, with line taps and drop cable

running to each remote drop. Remote drop can support up to 128 I/O words. To protect the internal circuitry from corrosive gases such as Nitric Oxide, chlorine, sulfur dioxide and Hydrogen Sulfide, It is important to coat modules with conformal coating. For more information about 140-CRA Remote, you can [click here](#).

<http://www.modiconplc.com/schneider/Quantum-140/140-series/140CRA93100>